

16 19. (New) The positive-locking clutch according to claim 105, wherein the transmission shaft shoulder comprises a locking recesses on each axial end.

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16 19. (New) The positive-locking clutch according to claim 1920, wherein at least one locking roller element is always between the locking recesses.

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16 19. (New) The positive-locking clutch according to claim 21, wherein at least two locking roller elements are between the locking recesses at a time when the vehicle transmission shaft and the transmission component are not connected.---

REMARKS

I. Introduction

With the addition of new claims 15 to 21, claims 1 to 21 are pending in the present application. In view of the foregoing amendments and following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicant notes with appreciation the acceptance of the drawings filed on November 30, 2001, the acknowledgment of the claim for foreign priority and the indication that all of the certified copies of the priority documents have been received.

Applicant thanks the Examiner for considering the previously filed Information Disclosure Statement, PTO-1449 paper and cited references.

II. Rejection of Claim 5 Under 35 U.S.C. § 112

Claim 5 was rejected under 35 U.S.C. § 112, second paragraph as indefinite for allegedly failing to particularly point out and distinctly claim the subject matter of the invention. Claim 5 has been amended, however, the language focused on by this rejection remains unchanged. The Office Action alleges that the claim 5 recitation of the locking

roller element being configured to roll on a synchromesh body is contradictory with the claim 1 recitation of the positive locking clutch being free of synchromesh bodies. Applicant respectfully traverses this rejection for the following reasons.

Applicant respectfully submits that there is no contradiction between the recitations of claim 1 and 5. The synchromesh is not being positively recited in claim 5. The requirement that an element be configured to roll on another element does not require the presence or inclusion of that element. Accordingly, Applicant stresses that the locking roller element may be configured to roll on a synchromesh body even though the positive locking clutch is free of synchromesh bodies.

The second paragraph of 35 U.S.C. § 112 merely requires that the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Applicant respectfully submits that for the foregoing reasons the recitation in claim 5 regarding the configuration of the locking roller element is reasonably clear. Accordingly, withdrawal of this rejection and allowance of claim 5 is respectfully requested.

III. Rejection of Claims 1 to 14 Under 35 U.S.C. § 102(b)

Claims 1 to 14 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,303,151 ("Kolacz"). It is respectfully submitted that Kolacz does not anticipate claims 1 to 14 for the following reasons.

Independent claims 1, 5 and 7 relate to a gear-jumping-proof positive-locking clutch configured to connect a motor-vehicle transmission shaft to a transmission component mounted coaxially and rotatably with respect to the transmission shaft. Claims 1, 5 and 7 recite a gear-jumping-proof positive-locking clutch comprising at least one axially displaceable locking roller element and an axially displaceable sliding sleeve configured to support the at least one locking roller element. Claim 1 has been amended herein

without prejudice to recite that the at least one locking roller element is displaceable into a radial locking recess in at least one axial end of a transmission shaft shoulder.

Support for this limitation may be found, for example, on page 9, lines 19 to 22 of the Specification. Claim 5 has been amended herein without prejudice to recite at least one locking roller element displaceable into a radial locking recess in an axial end of a synchromesh body. Support for this limitation may be found, for example, on page 9, lines 19 to 22 of the Specification. Claim 7 has been amended to recite at least one locking roller element displaceable into a radial locking recess in an axial end of a support gearing. Support for this limitation may be found, for example, on page 14, lines 9 to 11 of the Specification.

Kolacz purports to relate to a positive locking mechanism on a shift coupler for a vehicle transmission. See Abstract. The mechanism is stated to include a clutch sleeve with a radial opening for receiving balls which lock the clutch sleeve. Figures 2 and 3 show two balls or detent elements 32 and 33 which are receivable in a centered recess 31. Figures 4 and 5 show one ball or detent element 45, which are receivable in three recesses 42, 43 and 44. Recess 43 is stated to be a central recess. See col. 2, line 49. Recess 42 is formed on clutch hub 41 between central recess 43 and an axial end of clutch hub 41. Recess 44 is formed on clutch hub 41 between central recess 43 and an opposite axial end of clutch hub 41. Kolacz does not disclose a radial locking recess in at least one axial end of a transmission shaft shoulder, as recited in amended claim 1, or a radial locking recess in at least one axial end of a synchromesh body, as recited in claim 5, or a radial locking recess in at least one axial end of a support gearing, as recited in claim 7. As stated above, in Kolacz the recesses are either centered or located between an axial end of clutch hub 41 and the center of clutch hub 41. For the foregoing reasons Applicant respectfully submits that Kolacz does not anticipate amended

claims 1, 5 and 7 and allowance of these claims is respectfully requested.

To anticipate a claim, each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). As more fully set forth above, it is respectfully submitted that Kolacz does not disclose, or even suggest, a radial locking recess in at least one axial end of a transmission shaft shoulder, as recited in amended claim 1, or a radial locking recess in at least one axial end of a synchromesh body, as recited in claim 5, or a radial locking recess in at least one axial end of a support gearing, as recited in claim 7. It is therefore respectfully submitted that Kolacz does not anticipate independent claims 1, 5, and 7.

Additionally, to reject a claim under 35 U.S.C. § 102, the Examiner must demonstrate that each and every claim limitation is contained in a single prior art reference. See, Scripps Clinic & Research Foundation v. Genentech, Inc., 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991). Still further, not only must each of the claim limitations be identically disclosed, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention, namely the inventions of the rejected claims, as discussed above. See, Akzo, N.V. v. U.S.I.T.C., 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986). In particular, it is respectfully submitted that, at least for the reasons discussed above, the references relied upon would not enable a person having ordinary skill in the art to practice the inventions of the rejected claims, as discussed above. Also,

to the extent that the Examiner is relying on the doctrine of inherency, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flows from the teachings of the applied art." See M.P.E.P. § 2112 (emphasis in original); and see, Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic. Accordingly, the anticipation rejection as to the rejected claims must necessarily fail for the foregoing reasons.

In summary, it is respectfully submitted that Kolacz does not anticipate amended independent claims 1, 5 and 7.

As for claims 2 to 4, 6 and 8 to 14, which ultimately depend from claim 1 and therefore include all of the limitations of claim 1, it is respectfully submitted that Kolacz does not anticipate these dependent claims for at least the same reasons given above in support of the patentability of claim 1.

In summary, it is respectfully submitted that Kolacz does not anticipate claims 1 to 14. Accordingly, allowance of these claims is respectfully requested.

IV. New Claims 15 to 21

New claims 15 to 21 have been added herein. No new matter has been added. These new claims are fully supported by the present application, including the Specification.

As regards claims 15 to 18, which ultimately depend from amended claim 1 and therefore include all of the limitations of amended claim 1, it is respectfully submitted that Kolacz does not anticipate these dependent claims for at least the same reasons given above in support of the patentability of amended claim 1.

As regards claims 19 to 21, which ultimately depend from amended claim 5 and therefore includes all of the limitations of amended claim 5, it is respectfully submitted

that Kolacz does not anticipate these dependent claims for at least the same reasons given above in support of the patentability of amended claim 5.

V. Conclusion

Attached hereto is a marked-up version of the changes made to the claims by the current Amendment. The attached pages are captioned "Version with Markings to Show Changes Made."

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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THE CLAIMS:

New claims 15 to 21 have been added.

Claims 1, '5 and 7 have been amended without prejudice as follows:

1. (Amended) A gear-jumping-proof positive-locking clutch configured to connect a motor-vehicle transmission shaft to a transmission component mounted coaxially and rotatably with respect to the transmission shaft, comprising:
at least one axially displaceable locking roller element;
and

an axially displaceable sliding sleeve configured to support the at least one locking roller element;

wherein the at least one locking roller element is displaceable into a radial locking recess located in at least one axial end of a transmission shaft shoulder in accordance with a radial force component with axial displacement of the sliding sleeve, the locking roller element located in the locking recess at a time of establishment of the connection between the vehicle transmission shaft and the transmission component, the positive-locking clutch being free of synchromesh bodies.

5. (Amended) A [The] gear-jumping-proof positive-locking clutch [according to claim 1,] configured to connect a motor-vehicle transmission shaft to a transmission component mounted coaxially and rotatably with respect to the transmission shaft, comprising:

at least one axially displaceable locking roller element;
and

an axially displaceable sliding sleeve configured to support the at least one locking roller element;

wherein the at least one locking roller element is displaceable into a radial locking recess in an axial end of a

Serial No. 10/000,431

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synchromesh body in accordance with a radial force component with axial displacement of the sliding sleeve, the locking roller element located in the locking recess at a time of establishment of the connection between the vehicle transmission shaft and the transmission component;

wherein the locking roller element is configured to roll on a synchromesh body connected in a rotationally fixed manner to the vehicle transmission shaft by a shaft-hub connection.

7. (Amended) A [The] gear-jumping-proof positive-locking clutch [according to claim 6,] configured to connect a motor-vehicle transmission shaft to a transmission component mounted coaxially and rotatably with respect to the transmission shaft, comprising:

at least one axially displaceable locking roller element;
and

an axially displaceable sliding sleeve configured to support the at least one locking roller element;

wherein the at least one locking roller element is displaceable into a radial locking recess in accordance with a radial force component with axial displacement of the sliding sleeve, the locking roller element located in the locking recess at a time of establishment of the connection between the vehicle transmission shaft and the transmission component, the positive-locking clutch being free of synchromesh bodies;

wherein a roller element support is rotationally fixed and axially displaceable with respect to the vehicle transmission shaft, the locking roller element guidable inside the roller element support;

wherein the roller element support includes an axially aligned support gearing constantly engaging a shaft gearing arranged in a rotationally fixed manner with respect to the vehicle transmission shaft, the support gearing in a disengaged state rotatable with respect to the transmission

Serial No. 10/000,431

Version with Markings to Show Changes Made

component and, in an axially displaced and clutched state of the positive-locking clutch, engaged in a gearing of the transmission component; and

wherein the support gearing comprises a radial locking recess in at least one axial end.